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Effects of a Reciprocal Peer Counseling Program for College Students:

A Randomized Controlled Trial

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Effects of a Reciprocal Peer Counseling Program for College Students: A Randomized Controlled Trial

by

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Abstract

Effects of a Reciprocal Peer Counseling Program for College Students: A Randomized Controlled Trial

by

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The severity and prevalence of student mental health issues at U.S. colleges and universities are steadily rising (Prince, 2015). Given that counseling and mental health centers (CMHCs) increasingly strain to meet student demand (Smith et al., 2007; Xiao et al., 2017), innovative programs are needed to supplement existing services and preventively address root causes. This proposal outlines a randomized controlled trial of one such program at the University of Texas at Austin: a group peer counseling program where students take turns as both providers and recipients of peer support. Participation is expected to decrease loneliness and increase mental flourishing. This is hypothesized to be due to the benefits of providing and receiving support in a consistent group of peers. To assess differences in participants' levels of loneliness and flourishing, repeated measures analyses of variance will be conducted. Evaluative points will be at baseline, upon program completion, and 4 weeks post-completion, as compared to treatment as usual. Study results would directly inform one promising avenue through which CMHCs can evolve to meet rising student demand while simultaneously addressing root causes of mental distress.

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Introduction

This document addresses two major challenges currently facing the field of college mental health. One is that all students benefit from access to mental health support, not just those with severe issues and diagnoses. The second is that community and connection are imperative for mental wellbeing, and their absence creates downstream distress that drives rising demand for counseling services. Consequently, a major question facing college Counseling and Mental Health Centers (CMHCs) is how to increase access to mental health support while simultaneously tackling root causes of distress, such as loneliness and social disconnection.

It is well documented that most CMHCs strain to meet the increasing needs of their students (for review, see Xiao et al., 2017). Demand for services is steadily increasing and frequently outstrips supply (Watkins, Hunt & Eisenberg, 2011). Alarmingly, the frequency and severity of mental health issues students present with are also steadily rising (Duffy, Twenge, & Joiner, 2019; Gallagher, 2014; Prince, 2015), and many additional students with mental health issues do not receive treatment (Ketchen Lipson, Gaddis, Heinze, Beck & Eisenberg, 2014; Yorgason, Linville, & Zitzman, 2010). Few would contest that increasing access to campus mental health services is an important and pressing need, both to better support existing clients and to reach a large body of underserved students.

Additionally, a significant body of research documents that several of the most common student mental health concerns are strongly linked to loneliness – a negative feeling that results from thinking that one's social relationships are deficient in terms of quality or quantity (Perlman & Peplau, 1981). Specifically, loneliness is a significant risk factor for depression (Cacioppo et al., 2006; Heinrich & Gullone, 2006) and suicidality (Jaremka et al., 2014; Levi-Belz et al., 2013). For many students, the beginning of college may be an especially lonely time: in one

study of 377 freshman and sophomore college students, 25.9% of men and 16.7% of women reported feeling a “deep sense of loneliness” (Knox et al., 2007). Indeed, the residential nature of many US colleges requires students to live independently, often for the first time, and to create new supportive relationships de novo. This is in many cases a uniquely difficult transition.

How can CMHCs address these underlying social causes of distress in a scalable format that also increases overall access to mental health support? One potential innovation would be to train communities of students in basic listening and helping skills, which they can then use to reciprocally peer counsel each other. A reciprocal peer counseling program, if effective, has several benefits. These include: 1) providing empirically validated counseling ingredients to a potentially large body of students with less severe issues who might otherwise receive no treatment, 2) creating environments likely to foster autonomy, competence and relatedness and thus lead to psychological flourishing, and 3) delivering additional benefits such as social connection and relationship skills training, which are associated with positive mental health. The present study proposal seeks to examine the effectiveness of one such reciprocal peer counseling program currently in development at the University of Texas at Austin. Students will be randomized to participate in a semester-long peer counseling experience or to receive treatment as usual. This document focuses on the rationale, methodology, and implications for conducting such a study.

Integrative Analysis

The literature review below is divided into three sections. The first section highlights the pressing need for innovation in the provision of college mental health services. Specifically, it outlines how current CMHC offerings increasingly fail to meet the rising tide of student demand, leaving many students unserved or underserved. This informs the argument that college mental health services must evolve to more efficiently reach a larger body of students who seek or need mental health resources.

The second section describes two main theoretical underpinnings of the proposed intervention. First, this section highlights the ways in which rising student demand is tied to an upstream cause that peer counseling may be able to address – loneliness. This includes the definition of loneliness, the degree to which college students experience loneliness, and the literature linking loneliness to concerns such as depression and suicidality that are commonly faced by students who visit CMHCs. This informs the argument that helping students build deeper and more meaningful social connections is likely to lead to improved mental health outcomes in both present and future. Next, this section introduces self-determination theory, which explains why having students act as both providers and recipients of support in a consistent group of students is likely to lead to psychological flourishing.

The third section turns to the literature on peer counseling, an intervention that may be well positioned to assist with scalability, foster prevention, and catalyze psychological flourishing. This section first summarizes research supporting the idea that having students deliver basic counseling ingredients to each other would be a realistic and effective intervention. Next, it describes existing college peer counseling interventions and what research has already been conducted. Finally, it explains the idea of *reciprocal* peer counseling and the relative

advantages of a reciprocal counseling model. In sum, the Integrative Analysis illuminates the reasons why having students both provide and receive support as part of a peer counseling group may be a particularly effective intervention worthy of research attention.

Need for Innovation in College Mental Health Services

Rising demand for mental health services. As previously noted, the frequency and severity of college students' mental health issues appears to be increasing over the past several decades (Benton, Robertson, Tseng, Newton, & Benton, 2003; Duffy, Twenge, & Joiner, 2019; Gallagher, 2014; Hyun, Quinn, Madon, & Lustig, 2006; Prince, 2015; Twenge et al., 2010). According to one survey of 14,175 students across 26 U.S. campuses, nearly one third of all students suffer from a clinically diagnosable mental health condition (Eisenberg et al., 2013). The American College Health Association reports similar findings, noting that in a 12-month period 37% of students felt overwhelmed by anxiety, and one third reported feeling so depressed it was difficult to function (American College Health Association, 2014).

Notably, these numbers represent significant increases. A recent analysis of two large, nationally representative datasets including nearly 790,000 students concludes that self-reports of depression, anxiety, self-injury, suicide attempts and suicidal thoughts all "increased markedly" from 2007 to 2018 (Duffy et al., 2019). Data reported by counseling centers point to the same trend. In a 2014 survey, the reported percentage of U.S. CMHC clients with severe mental health issues rose to 52%, up from 44% the previous year, and 94% of CMHC directors reported a noticeable increase in students with severe psychological problems (Gallagher, 2014). The number of students seeking treatment at the average CMHC has also increased by 30% from 2009 to 2014, as compared with an only 6% institutional enrollment increase (Xiao et al., 2017).

These data make it clear that college students' need for mental health services is rapidly increasing.

Inability of CMHCs to meet rising demand. Research also shows that CMHCs struggle to meet these increases in demand. Only 4% of American College Counseling Association members report that caseload is not a problem for their CMHC (Smith et al., 2007). In response to this increased demand, CMHCs employ a variety of strategies: a recent study found that 55% of CMHCs at large universities report having expanded external referral networks and 52% increased hiring of part-time counselors (Gallagher, 2014). Additionally, 43% of CMHCs promote themselves as having "short-term counseling services", and 30% have specific session limits (Gallagher, 2014). Notably, these limits seem to be more a function of constrained resources than a reflection of the level of care students need (Benton et al., 2003; Smith et al., 2007). For example, in a qualitative survey of CMHC directors, one director reported, "If we had more people we could do better long-term care – that we have to do this little band-aid of a short term, it's frustrating for the clinicians, it's frustrating for the students" (Watkins, Hunt, & Eisenberg, 2012, p. 330).

Beyond this rapidly increasing body of students who do seek services, it is well documented that many college students with mental health issues do not ever receive any form of treatment (Ketchen Lipson et al., 2015; Yorgason et al., 2008). In a particularly stark example, counseling center directors report that an alarming 86% of suicides in the 2013-14 year were by students who had never sought CMHC support (Gallagher, 2014). These data strongly suggest that demand has already eclipsed supply, leaving many students either underserved or entirely unserved by the existing college mental health infrastructure.

Theoretical Basis for Reciprocal Peer Counseling as an Effective Intervention

Loneliness and Social Underpinnings of Mental Distress. In order for CMHCs to serve a growing body of increasingly distressed students, it may be valuable to target malleable constructs that are known antecedents of mental health distress. One such construct, loneliness, is highly correlated with mental health issues that most frequently affect college students. Loneliness is a negative feeling that results from thinking that one's social relationships are deficient in terms of quality or quantity (Perlman & Peplau, 1981). Unlike social isolation – an objective state of being physically withdrawn or excluded from social interaction – loneliness is a *subjective* and changeable feeling. Importantly, feelings of loneliness may not mirror one's actual social circumstances. Indeed, it is common to feel "alone in the crowd" (Cacioppo et al. 2007, p. 977) while surrounded by social connections if one does not find those connections to be adequately intimate or meaningful.

Pervasiveness of loneliness. Data suggest that loneliness is a pervasive issue in the United States. In 2018, a survey of 20,096 Americans 18+ run by the health insurer Cigna found that 46% of respondents reported feeling alone, 47% felt left out, and 43% felt their existing relationships were not meaningful (Cigna U.S. Loneliness Index, 2018). Only 18% of respondents reported having people they can talk to, and 53% reported having a meaningful social interaction, such as an extended conversation, on a daily basis.

College students are no exception. Research on social disconnection in college students extends back to the early 1980's. In an early study of the UCLA Loneliness Scale, Cutrona (1982) found that 75% of freshman reported feeling lonely in first 2 weeks of college. A decade later, Berman & Sperling (1991) studied the transition to college and concluded that loneliness is an inherent part of the experience of most first-year students. Recently, the National Research Consortium of Counseling Centers in Higher Education conducted a large, nationally

representative survey of over 12,000 students from 18 four-year US colleges and universities to assess the relative contributions of malleable and non-malleable psychological variables on student wellbeing. The study found that malleable factors such as social connection, perfectionism, resilience, meaning in life, and self-efficacy accounted for 15.53% of the variance in students' distress and suicidality. Notably, social connection explained more of the variance than any other malleable construct in the study, accounting for a full 6.61% of the variance in distress and suicidality. These results are especially striking given that the non-malleable variables studied (including race, ethnicity, sexual orientation, first generation status, financial aid status and adverse childhood experiences) cumulatively accounted for only 6.11% of the variance in distress and suicidality – less than the impact of social connection alone (Brownson et al., in preparation).

Detrimental effects of loneliness on mental health. These data linking perceived social disconnection with distress and suicidality in college students are bolstered by a large body of research connecting loneliness to myriad negative health outcomes (for a review, see Hawkley & Cacioppo, 2010). Specifically, there is quite convincing evidence that loneliness is a significant risk factor for depression (Cacioppo et al., 2006; Heinrich & Gullone, 2006; Hawkley & Cacioppo 2006) and suicidality (Jaremka et al., 2014; Muyan et al., 2016; Levi-Belz et al., 2013). To understand the severity of loneliness, one must simply reflect that the negative health impact of loneliness is comparable to that of major known risk factors such as smoking, obesity, high blood pressure, and lack of exercise (Holt-Lunstad et al., 2010, 2015). Indeed, the former U.S. Surgeon General equates chronic loneliness with smoking 15 cigarettes a day ("Work and the Loneliness Epidemic," 2017).

Moreover, loneliness has also been documented to have negative effects on academic achievement (Benner, 2011) and academic persistence (Nicpon et al., 2006), which are intuitively important factors for college student wellbeing. Academic and social integration are connected to college retention (Pascarella & Terenzini, 2005), and a lack of perceived positive peer relationships is known to predict academic difficulties (Dennis et al., 2005; Walton & Cohen, 2011). The above data make it clear that loneliness damages students' mental, physical, and academic wellbeing, and is thus highly worthy of attention and intervention.

How group peer counseling may affect loneliness. Given that loneliness is 1) a common experience, 2) highly correlated with depression, distress and suicidality, and 3) a subjective experience as opposed to an objective state, it may be an especially promising target for intervention. In the proposed reciprocal peer counseling program detailed below, students become part of a group that allows them to both foster deep and meaningful relationships during the intervention period, and which also serves as a training ground for developing skills needed to create and maintain healthy support relationships in other areas of life. Consequently, the proposed reciprocal peer counseling framework is a two-pronged approach to addressing college student loneliness – it may provide immediate effects while also preventively setting students up for longer-term success.

Self-Determination Theory. Researchers draw on a diversity of proposed mechanisms to explain why peer support can be effective (see Dennis, 2003; Solomon, 2004). The most commonly cited is social learning theory (Bandura, 1979), in which the peer counselor acts as a positive role model for the client. Although this model remains relevant, it is no longer the primary explanatory mechanism once reciprocity is introduced into the peer counseling relationship. To understand this, it is important to consider that most peer support programs

implicitly assume that 1) the client is deficient in some way, and 2) the peer counselor is operating in an official capacity where they have greater experience, power, or resources than the client. The reciprocal model, however, focuses on creating conditions to reduce loneliness and foster psychological wellbeing: it is egalitarian and strengths-based, not hierarchy and deficit-based. Consequently, self-determination theory (Deci & Ryan, 1985) provides a more relevant theoretical explanation for the benefits of reciprocal peer counseling, as described below.

Overview of Self-Determination Theory. Self-determination theory (SDT) is a broad framework that describes the way that social and environmental conditions either enhance or hinder motivation and psychological wellbeing. It is inherently a theory about psychological flourishing, which posits that human nature is intrinsically motivated to thrive as long as it is provided with the basic psychological needs, or nutrients, needed to do so (Ryan & Deci, 2017). Within SDT, basic psychological needs theory (BPNT; Deci & Ryan, 2000) is a smaller theory that states that people have three needs that must be met for optimal human development and functioning: autonomy, competence, and relatedness. Autonomy is the feeling of being free to and capable of making one's own choices. Competence is the feeling that one's skills and abilities are adequate, and that one has opportunities to use those abilities. Relatedness is a feeling of social connectedness, belonging, and being useful to others (Ryan & Deci, 2002). The theory posits that if these needs are not met – that is, if psychological needs are "thwarted" – then a host of defensive and compensatory mechanisms lead to the erosion of wellbeing.

An important element of SDT is that social environments strongly affect people's abilities to get their psychological needs met. Individuals need environments that are autonomy supportive (that allow choice and encourage self-regulation), competence supportive (that foster skill development and positive feedback), and relationally supportive (where one feels integrated

in caring relationships with others). These elements are both theorized to catalyze wellbeing in the present, and to promote continued wellbeing into the future (Ryan & Deci, 2017). This is why reciprocal peer counseling in a group is expected to be preventive – it both fosters healthy relationships and healthy psychological conditions in the present, and also equips participants with the social and emotional tools to create similar conditions in future environments. The following section outlines how a reciprocal peer counseling program would provide students with these types of environments.

Autonomy. The authors of SDT reflect that, "autonomy is facilitated by awareness, which entails an authentic attempt to experience and become conscious of what is occurring within and around oneself" (Ryan, 2012, p. 102). Consequently, a counseling environment that provides fertile ground for reflection and introspection may be highly effective in fostering this type of awareness (for a discussion of SDT in psychotherepy, see Ryan & Deci, 2008). Additionally, autonomy supportive environments allow individuals to experiment, make choices, have their perspectives acknowledged, and to create alignment ("congruence") between their actions, interests, and values. A counseling environment is likely to facilitate many of these components.

Importantly, research shows that friendships and peer relationships where both parties reciprocally provide and receive autonomy support to each other are conducive to psychological wellbeing (Deci, La Guardia, Moller, Scheiner, & Ryan, 2006). This dynamic also holds for strangers, not just close friends – as long as help is given autonomously and not forced, caring for others benefits both giver and receiver (Weinstein & Ryan, 2010). Thus, a peer counseling environment where students both give and receive support reciprocally is likely to nourish the need for autonomy and may consequently lead to psychological wellbeing.

Competence. Competence refers to the feeling that one is building skills and abilities and has opportunities to use them. Ryan and Deci (2017) note that competence is easily thwarted, for example by negative feedback, challenges that are too difficult, and circumstances that seem overwhelming and unmanageable. These issues are particularly relevant at the beginning of college, when students are learning to navigate new environments and academic challenges without the aid of supportive environments and individuals with which they are familiar. Additionally, competence is also easily thwarted by social comparisons (Ryan & Deci, 2017), which are extremely common especially at the beginning of college. Given this, it may be especially competence-promoting for students to be part of an environment where they first learn concrete helping skills and then immediately engage in applied practice. Learning these skills would also be accompanied by receiving positive feedback on developing peer counseling abilities, which is also likely to promote feelings of competence (Ryan & Deci, 2017).

Relatedness. The authors of SDT reflect that relatedness is about feeling that one is an integral part of the social structures around them. This involves not both feeling supported by others, and also feeling like one is able to provide value or be needed by others (Deci & Ryan, 2014). Additionally, research shows that the social activities that most greatly contribute to relatedness needs are meaningful conversations and feeling understood and appreciated by the people one is speaking to (Reis et al., 2000). When someone else fully understands and appreciates what a person is saying, this also increases feelings of relatedness through the perception that the interaction is genuine (La Guardia et al., 2000). As such, a peer counseling environment where students are trained to have empathetic and meaningful support conversations with each other may be particularly primed to induce feelings of relatedness.

In sum, reciprocal peer counseling environments are spaces where students can increase their self-awareness, shape their actions to be more aligned with their thoughts and values, learn valuable and transferable relational support skills, and become connected and in-service to other students in meaningful ways. As such, this type of program is likely to foster human needs for autonomy, competence and relatedness in the social environments they occupy, which in turn are likely to be conducive to the psychological flourishing of student participants.

Innovation Opportunity: Introducing Reciprocity into College Peer Counseling

Benefits of Basic Counseling Ingredients. Research suggests that a set of core therapy ingredients may be effective for treating a wide range of sub-clinical concerns, and that it may be possible for these ingredients to be delivered by peers. Consequently, receiving basic counseling ingredients from peers may constitute an effective intervention in its own right, in addition to feelings of autonomy, competence and relatedness (described above) that may arise from being part of a reciprocal counseling group. These benefits of basic counseling ingredients delivered reciprocally by peers are described below.

Research on Supportive Psychotherapy. Most psychotherapy modalities do not have significantly different impacts (Wampold & Imel, 2015), and much of the observed variance in treatment outcomes can be traced back to a basic set of therapy ingredients (Bell et al., 2013; Wampold, 2015). The application of these core therapy ingredients in a clinical setting, without the added layer of a directive or expressive therapy modality, is referred to as Supportive Psychotherapy (Pinsker, 1997). A meta-analysis of randomized controlled trials comparing supportive psychotherapy to waitlist or no treatment conditions indicates that supportive psychotherapies have a medium effect ($d = 0.6$) and that the difference between supportive psychotherapy and other treatments is small (Cuijpers et al., 2012). Indeed, supportive

psychotherapy is so effective that some researchers argue it should be featured as a "therapy of choice" in research trials rather than being the control condition (Markowitz, 2014; Hellerstein, Pinsker, Rosenthal & Klee, 1998).

Supportive Psychotherapy is rooted in the work of Carl Rogers and is characterized by the therapist embodying an attitude of positive regard, non-judgement, empathy, and openness toward the client. Specific skills include providing high-quality attention, reflections of content and feeling, asking open-ended questions, and other skills taught in common training models such as Ivey's microcounseling skills (Ivey et al., 2009) and Hill's helping skills (Hill et al., 2007). In addition to forming the foundation of many counselor education programs (Hill, 2007; Whinston & Coker, 2000), supportive psychotherapy is now listed alongside cognitive-behavioral and psychodynamic therapies as a basic competency that graduating medical residents must demonstrate proficiency in (ACGME, 2017). In sum, research suggests that basic Rogerian counseling ingredients that form the foundation for many counselor training programs can be quite effective when delivered on their own.

Feasibility of Having Peers Deliver Basic Therapy Ingredients. If a basic set of therapy ingredients accounts for a large part of the variance in treatment outcomes, it may be beneficial to deliver these ingredients to students through more scalable mechanisms than 1:1 therapy with a highly trained professional. Research suggests this may be possible: perhaps surprisingly, a meta-analysis of treatments for anxiety and depression showed effectively no difference between guided self-help and 1:1 psychotherapy (d = -.02; Cuijpers, Donker, van Straten, Li, & Andersson, 2010). This suggests that certain treatments can be quite effective even in the absence of a live, highly trained clinician. However, although self-help programs completed by individuals can be effective, a number of reviews have commented that development of 1:1 peer

support interventions should be prioritized (Griffiths et al., 2006; Hoey et al., 2008). This is largely due to additional benefits that 1:1 peer support provides beyond what individuals can provide to themselves.

In response to this call, researchers assessed the feasibility of teaching supportive psychotherapy skills through a fully online course to non-professionals suffering moderate levels of psychological distress. Participants were randomized into treatment or waitlist conditions and the presence of basic counseling skills was assessed in coded, face-to-face peer counseling sessions completed before and after instruction. Results indicate significant increases in the use of reflections and open-ended questions, increased listening, and reduced advice giving. Additionally, individuals in the "client" role rated peer counseling sessions as significantly more helpful after their "counselor" had received training, as compared with sessions conducted before training (Bernecker, Williams, Caporale-Berkowitz, Wasil & Constantino, under review). These findings are especially promising in light of earlier research suggesting that interventions delivered by paraprofessionals may be comparable to treatments delivered by professionals (Christensen & Jacobson, 1994; Durlak, 1979; Strupp & Hadley, 1979), as well as newer findings showing that peer support interventions are often rated by users as equally effective to traditional psychotherapy (Baumel, 2015).

These findings suggest that supportive psychotherapy skills may have broader applicability than their current use. This idea is supported by one of the foremost textbooks on the subject, *Introduction to Supportive Psychotherapy* (Winston, Rosenthal & Pinsker, 2004), which states:

> The conversational style of supportive psychotherapy defines the procedure as an interaction, not primarily a lesson, not primarily an exploration of mental content, and not an interrogation. These findings suggest not only that supportive psychotherapy is broadly applicable, including in areas where traditional expressive treatments are not

indicated, but also that it can be used successfully with a wide spectrum of problems and with higher-functioning patients.

In sum, if supportive psychotherapy skills can be effectively taught to non-professionals, constitute an interaction and not an intervention, and provide significant benefits even for higher-functioning clients, this provides a strong argument for studying the effects of teaching these skills to a broader population than just therapists and psychiatrists. The present study outlines the first empirical test of this potential new model in a college population.

Overview of Existing College Peer Support Programs. Despite the existence of many college peer support programs, high quality, quantitative research in this area is surprisingly scarce, with most research dating back to the 1970's and 1980's (for a historical summary, see D'Andrea, 1987). The following sections describe the relevant quantitative research that does exist and then overview the various peer support programs currently found at U.S. colleges and universities.

Research on Peer Support in U.S. Colleges. To my knowledge, the only published survey of peer counseling programs at U.S. colleges dates back to 1984. The survey was sent to CMHC directors at 200 U.S. colleges and universities, of which 156 replied and 122 (78%) indicated the existence of peer counseling programs on their campuses. Of these programs, only 34% reported that their programs had a psychological bent (eg. in contrast to academic counseling). Reports indicate that the top issues discussed by peer counselors were academics, friend and romantic relationships, career and future anxieties, and depression. It is worth noting that suicidality, an issue that should be addressed by professional counselors and not peers, was one of the least frequently discussed concerns. 26% of programs reported that peer counselors received >10 hours of training, 37% reported <10 hours, and the remaining programs either provided in-service training or were unclassified. 43% of programs reported that peer counselors

were trained by CMHC staff, and 38% reported students were trained by professional staff from other settings (Salovey & D'Andrea, 1984).

Research conducted in the following decades is limited. A review of peer education programs published in 1993 concludes that, "existing literature gives little indication of how successful peer education programs have been in encouraging positive behavioral change on the part of students" (Fennell, 1993). An updated review would likely arrive at similar conclusions, often due to methodological limitations of studies. For example, Hatcher et al. (2014) report on a college peer counseling course that had positive effects on participants' relationships and communication skills. However, the study lacked randomization, which decreases confidence in this result. In another trial lacking randomization, Badura-Brack, Millard, Peluso, and Ortman (2000) studied a peer education class for undergraduates at a midwestern university and failed to find improvements in participants' self-esteem. In both cases, methodological concerns make it difficult to draw definitive conclusions about program efficacy.

Research on Peer Support in Colleges Abroad. Data on college peer counseling programs abroad are similarly difficult to interpret. In one quantitative trial of a peer support program based in Turkey, students completed a set of activities geared to improve mental wellbeing together with a peer helper. Results suggest significant increases in positive affect and life satisfaction, and decreases in negative affect, as compared with a control group (Eryılmaz, 2015). However, it is unclear whether control and treatment participants were randomized, and it is impossible to distinguish the effects of peer interaction from the effects of activity completion (eg. writing oneself a letter). These results are bolstered, however, by a Turkish doctoral thesis that did employ randomization. In this study, a peer helping program was found to increase participants' self-esteem and self-acceptance scores, as compared with a control group (Aldag,

2005). A peer counseling program at Singapore Management University reports that 93% of participants would recommend the program to their friends, and also reports improvements in participants' levels of self-awareness, emotional awareness, and self-esteem (Tan & Hsi, 2007). However, the study has several limitations, including the use of a retrospective pretest, which call into question the methodological rigor of the study.

A review of peer support programs in non-university contexts is beyond the scope of this paper, but it is worth noting that research in this area is promising. For example, a recent review of trials that use paid peer supporters in non-university mental health settings notes that inclusion of peer-delivered services results in at least equivalent outcomes as services provided by non-peer staff, and may have greater positive impacts on clients' hope, empowerment, and quality of life (Bellamy et al., 2017). However, inside and outside universities, programs often differ in terms of their goals, theoretical orientations, and program designs, all of which contribute to the difficulty of producing generalizable results. Given the dearth of rigorous research on college peer support programs, continued quantitative research using robust designs on programs with clear theoretical orientations may be a particularly worthy endeavor.

Existing College Peer Counseling Interventions. Despite the weakness of existing quantitative research, many college peer support programs do exist. Programs differ in terms of their formats, intended outcomes, counseling center affiliations, and training elements. The two major program types are detailed below.

The 1:1 Peer Support Model. Many colleges and universities have implemented programs where a select group of students is trained to support their peers in person or over the phone. In these programs, peer support is provided *unidirectionally* and participants do not receive support in return. This model is exemplified by Washington and Lee University's peer counseling

program. Interested students attend a week-long training at the beginning of the academic year, followed by additional brief trainings each month. The training covers topics such as depression, anxiety, disordered eating, grief, alcohol or substance use, and academic issues. Peer Counselors are then available to other students as a support resource, in addition to services provided by the university counseling center. Other universities including Yale, Harvard, Cornell and Northwestern also offer similar programs where students can access drop-in or pre-scheduled peer counseling sessions delivered by trained peers. At some institutions, such as Oxford and Hamilton College, these programs are closely affiliated with the counseling center and marketed as such, while other programs, such as Berkeley, market themselves as student-driven to increase perceived accessibility.

Several colleges and universities offer variations of this model. At Columbia, Princeton and Penn, peer support sessions happen primarily over the phone, as opposed to in person. At UCLA, students can access a program where they gain access to a peer coach that they work with for an entire semester to improve academics and general performance. At Brown, students with lived experience in areas such as substance abuse and trauma can become Peer Mental Health Advocates and provide support to other students on specific issues they have experience navigating. Although the medium and goals of counseling differ between each of these models, support is always provided unidirectionally, in a 1:1 format, and programs appear to be conceptualized and marketed as largely remedial services.

The Group Peer Support Model. In contrast, other programs do not focus on 1:1 support. The most well-known program of this type is University of Michigan's Wolverine Support Network, in which participants are assigned to a group of 6-10 students, led by a peer facilitator, that meets weekly. The program, which runs approximately 30 groups per semester including

nearly 600 students, is designed to get students talking with each other about college life and emotional wellbeing. These programs differ from other peer support programs in that they gather a consistent group of students over the course of the semester and thus allow for the formation of meaningful relationships that can persist outside of the group. Although, these programs foster social cohesion and are not framed as remedial, they do not include a 1:1 component where students gain the benefits of giving and receiving support individually.

Additional programs. Most CMHCs, such as the one at University of Texas at Austin, also offer group therapy or workshop experiences where students can talk about college life with a consistent group of peers. However, students are usually discouraged from forming ongoing relationships outside the group, so social connections are not often built as a result. Some colleges have experimented with offering peer counseling courses, such as those reported on above, but these seem to be mostly small elective courses taught on a selective basis and not ongoing programs. In sum, existing college peer support programs usually either provide unidirectional 1:1 support *or* social connection, but not both. To my knowledge, no ongoing programs exist that employ a reciprocal peer counseling model where students both provide and receive support.

Relative Strengths of Reciprocal Peer Counseling Model. Training students to support each other reciprocally retains all of the benefits existing peer support programs provide. These include the therapeutic effects that come from self-disclosure (Andrade et al., 2014), from putting difficult experiences into words (Frattaroli, 2006), and from having a listener accept and understand one's emotions (Wolgast, Lundh & Viborg, 2011). Importantly, a reciprocal model where students both provide and receive support also provides many additional benefits beyond those delivered by unidirectional models:

Increases scale. A reciprocal model where students are trained to support each other has the potential to reach a large volume of students who would otherwise not be served. If such a program were framed around community building, leadership development or relationship skills training (i.e., not called "counseling"), this would likely increase its general appeal, especially for students who may not identify as needing counseling or mental health support. Because attitudinal barriers are the largest factor limiting access to mental health treatment (Andrade et al., 2014; Mojtabai et al., 2011), programs are needed that address root causes of mental health distress without implying that students who engage in them must be mentally disordered.

Additionally, this type of program would provide students with tools and norms for having peer support conversations in their own spaces and on their own schedules. This is a marked departure from most existing programs and CMHC offerings where students must make an appointment, often weeks in advance. This is important because waitlists and needing to schedule an appointment are known to deter students from accessing services (Furr et al., 2001). Further, some data suggest that students are more likely to approach a friend than to approach a student or staff member who occupies an official counselor role (Catanzarite & Robinson, 2013; Hsi & Chung, 2010). Consequently, it may be more effective to teach students counseling skills they can use in regular conversations than to create spaces and services specifically designated as "counseling". Additionally, preliminary research indicates that peer counseling programs may also be an effective way of reaching students of color (Tsong et al., 2019), who are often less likely to seek services.

Provides social connection. A reciprocal model conducted in groups has significant promise to shift students' perceptions of their social connections. Loneliness is highly correlated with negative mental health outcomes such as depression and suicide that often affect college

students (Hawkley & Cacioppo, 2010; Masi et. al., 2011), and results from thinking that one's social relationships are deficient in terms of quality or quantity (Perlman & Peplau, 1981). Consequently, if students are surrounded by peers with whom they have both the habit and the tools needed to have meaningful conversations about their lives, this is likely to increase students' perceptions about the strength of these social connections. Given that perceived social support is a strong buffer against mental health issues (Brugha et al., 2005), this may constitute a mental health intervention in its own right beyond the individual effects of supportive psychotherapy ingredients delivered by peers.

Provides benefits of giving support. Giving to others generally promotes happiness (Dunn et al., 2008). Specifically, the act of providing social support has strong positive mental health impacts (for review, see Repper & Carter, 2011) – an experience that clients in traditional psychotherapy do not receive. One large nationwide survey by Krause and colleagues (2007) found that providing informal assistance to others was associated with increased feelings of control and fewer depressive symptoms in the elderly. Brown and colleagues' (2003) study of mortality in elderly couples also showed a similar benefit of providing support. The study found that individuals who received social support (eg. from a spouse) lived longer, but that this variance in mortality was accounted for when *providing* social support was introduced to the model. Individuals who provided support to others lived longer.

These effects are by no means restricted to the elderly. In a study of peer support amongst individuals with chronic mental health problems, Bracke, Christiaens, & Verhaeghe (2008) found that benefits to self-esteem and self-efficacy are greater when individuals provide support than when they receive it. Another study by Schwartz & Sendor (1999) analyzed the effects of providing support between individuals with chronic disease. The study found that peer

supporters reported more improvements in confidence, awareness, self-esteem, and depression symptoms compared with the individuals they were supporting. The study's authors propose that these effects are due to a "response shift" that occurs through adopting a helping role, regardless of one's actual circumstances. Qualitative interviews indicate that increases to peer support workers' confidence and self-esteem may be related to feeling appreciated, feeling useful to others, and feeling competent (Moran et al., 2012; Mourra et al., 2014; Salzer & Shear, 2002). These findings suggest that taking on a supporter role has the potential to change students' conceptions of their self-esteem, self-efficacy, burdensomeness, and other variables that negatively impact mental health outcomes.

Proposed Research Study

Purpose of Study

The demand for mental health support on college campuses is rapidly eclipsing supply. For reasons outlined above, a reciprocal peer counseling model presents a promising innovation with the potential to help address this problem. A reciprocal peer counseling program, if effective, could provide *some degree* of mental health support to a large volume of students while decreasing psychosocial factors such as loneliness that are known antecedents of student distress. The present study seeks to assess the effectiveness of one such reciprocal peer counseling intervention to be implemented at the University of Texas at Austin, which could supplement existing offerings at CMHCs. Impacts of the program will be assessed by investigating the following research questions:

Research Questions

Research Question 1. To what extent does participation in a reciprocal peer counseling program reduce loneliness in undergraduate students at the University of Texas at Austin, compared with treatment as usual? *Hypothesis*: Participation in the program will result in significant reductions in loneliness for students in the treatment group, as compared with the control condition. Significant reductions will be maintained 4 weeks post-program.

Research Question 2. To what extent does participation in a reciprocal peer counseling program increase psychological flourishing in undergraduate students at the University of Texas at Austin, compared with treatment as usual? *Hypothesis*: Participation in the program will result in significant increases in flourishing for students in the treatment group, as compared with the control condition. Significant increases will be maintained 4 weeks post-program.

Methods

Participants. Participants will be undergraduate students at the University of Texas at Austin. Recruitment will occur through existing channels in the Prevention and Outreach branch of the UT-Austin CMHC. This will include fliers, banners on the CMHC website, and referral of students who contact the CMHC for services. The UT–Austin CMHC also has collaborations with campus groups such as the Longhorn Wellness center that regularly recruit students for other programs and can be allies in recruiting both participants and Peer Support Leaders (student facilitators, described below). Additionally, in order to recruit students who may not already be engaging the CMHC, a random sample of student emails will be requested from the university and these students will be sent information about the program. Student emails will be obtained in accordance with established procedures and will be routed through the CMHC director, Dr. Chris Brownson, who is also an Associate VP for Student Affairs.

Inclusion criteria. Recruitment will be targeted toward first year students due to the difficulties of forming new peer relationships and adapting to the college environment. However, to maximize access, interested students from other years will also be eligible. Importantly, existing CMHC clients will not be excluded. Restricting existing or previous CMHC clients would reduce external validity of the study because the program is intended to supplement treatment as usual for all students, not just those who are not engaging with traditional therapy. Additionally, restricting current or former CMHC users would greatly reduce the program's impact: students may have a positive experience of receiving counseling and consequently decide to join the program to pass the benefits of counseling onto others. Restricting the program to non-CMHC users also poses an ethical concern: participants cannot be barred from accessing CMHC services while they wait for access to the program as part of the waitlist control condition. Accordingly, "treatment as usual" may look different for each student. For example,

students may have 1) never engaged in counseling, 2) be existing CMHC users, 3) be engaged in counseling outside the university, 4) be taking medication without counseling, or 5) have engaged in previous counseling.

Excluding students with high mental distress. The program is not designed to treat students with clinical levels of distress and suicidality. One reason for this is that a meta analysis of randomized controlled trials including individuals with severe mental illness does not convincingly demonstrate that peer support is an effective intervention for these populations (Lloyd-Evans et al., 2014). Additionally, certain psychological conditions require treatment by a trained clinician and there is potential for emotional contagion among students in the highest levels of distress. Accordingly, interested participants will be asked to complete the Brief Symptom Inventory (BSI; Derogatis, 1993), a 53-item questionnaire assessing various forms of mental distress, not limited to depression, anxiety, hostility, paranoia, and symptoms of psychosis. This can be used to determine participants' Global Severity Index (GSI), which is frequently used by healthcare professionals to assess for clinical levels of psychopathology. Students will be ineligible for the program if they score above $T = 63$ on the GSI, which is recommended as a cut score for significant distress (Derogatis & Derogatis, 2001). Additionally, students will also be excluded who provide any response besides "Not at all" to the item "Thoughts of ending your life". Excluded participants will be referred to the CMHC for traditional counseling or psychiatric services, as needed. Similarly, if students with elevated distress are identified by group leaders or peers in the treatment group during the intervention, they will also be referred to the CMHC and evaluated on a case by case basis.

As part of the informed consent process, students will be informed that the program is not intended to treat students with more severe mental health conditions. However, students will not

be explicitly asked to disclose previous diagnoses. Because screening out students with more extreme conditions would be difficult, time consuming, and invasive, we will rely on the combination of four factors to promote safety: 1) screening students out if they score above $T = 63$ on the GSI or endorse suicidal ideation, 2) asking students to self-select out of the program if they identify as having certain psychiatric diagnoses that the program would not be appropriate for, and 3) asking program participants to notify staff if they are concerned about any student they work with as part of the program.

Intervention.

Treatment and control. After completing informed consent, interested participants will be randomly assigned into either a treatment or control condition. Treatment group participants will begin the program in the Fall semester and control group participants will complete measures simultaneously, while waiting to start the program the following Spring. Students in the treatment group meet for an initial half-day workshop led by program staff, followed by five 1.5-hour evening sessions led by peer support leaders that meet every other week. The group provides training on basic peer counseling skills, as outlined in Appendix B, and students work in rotating pairs, where students alternate in the "helper" and "client" roles, to practice skills taught in the course. Additionally, students meet outside of group time for five 1:1 peer counseling sessions that are scheduled at times and location of their choosing on alternating weeks between group meetings. Overall, the program will include 10.5 hours of group meetings (3 hour initial meeting + 1.5 hours x 5 follow-up sessions) and 7.5 hours of 1:1 peer counseling (1.5 hours x 5 sessions) outside of group time, making the total program commitment 18 hours over the course of the semester.

Program curriculum. Skills taught in the program are derived from the literature on supportive psychotherapy and are adapted from the "Do's and Dont's [sic] of Supportive Psychotherapy" (Markowitz, 2014) as well as skills taught in previous evaluations of reciprocal peer support programs (Bernecker et al., in press). Example training segments included in the curriculum are found in Appendix B. This includes both training on "ways of being" such as how to be fully present and adopt a warm, non-judgmental attitude, and on concrete skills such as reflections and open-ended questions. The Peer Support Ethical Code is listed in Appendix C. An example description of the introductory program session is included below.

Introductory session: Getting Started, Demo, Ethics, Safety. The first session has five objectives: 1) reviewing the program's objectives and how it works, 2) overviewing procedures for safety and ethics, 3) demonstrating peer counseling, 4) catalyzing an initial bonding experience among students, and 5) providing an initial peer counseling experience. First, program administrators will introduce themselves and the Peer Support Leader team. Students will be divided into their respective peer counseling groups of ~20 students each and will complete the improvisational game "I'm a Tree" in their groups as an icebreaker. Next, program leaders will review the objectives and expectations of the program. This will use a flipped classroom format where students first read a handout for several minutes and then facilitators answer questions and provide additional information. Subsequently, the facilitators will demo a 5-minute peer counseling exchange and answer questions. Facilitators will then transition into a discussion of peer counseling ethics, including considerations for peer counseling within a diverse student body. Facilitators will also overview the procedures of how to notify staff of any students they are concerned about to ensure safety. Finally, students will return to their groups

and complete a self-disclosure exercise in rotating pairs, adapted from Aron et al. (1997), that is designed to facilitate interpersonal connection.

Program framing. In order to increase student interest and maximize accessibility by reducing attitudinal participation barriers, the program will not be marketed as a mental health intervention. Students will not have to identify as being lonely or having mental health issues to participate. Instead, the program will be framed as a leadership development program designed to build relationship skills through the practice of peer support or peer coaching. Final naming considerations will depend on needs and preferences of the UT-Austin CMHC. This will also provide an important incentive to complete the program since students will expect to 1) learn transferable relationship skills, 2) build meaningful peer relationships, and 3) complete an experience that will benefit their resume.

Ethical considerations. As with any intervention, it is important to consider the ethical considerations and potential negative externalities that could arise from the program. As noted by Watson (2019), each of the factors that makes peer support beneficial can also be a liability. For example, emotional bonds between students can create healing relationships, but also can lead to burnout, boundary issues, or dependency. Several ethical considerations and the way they are mitigated are described below:

Ineffective or damaging counseling by peers. One main risk of peer counseling among college students is summarized by Gruver (1971): “The unsophisticated student could project his own difficulties onto his patients or burden the patient with his own personal problems. Without intending harm, the college student may be tempted to "play" at psychotherapy by asking personal questions and attempting to interpret the patient's verbalizations. […] A further possibility is that because they have nothing to lose, that is, professional status, they may exploit

the position or relationship with the patient to satisfy their own needs." This concern is addressed in several ways. Students will be instructed to focus discussions on recent stressors and not long-term issues or traumas because research on experimental disclosure indicates this approach is most effective (Frattaroli, 2006). Additionally, students receive careful training in *non-directive* peer counseling techniques and are explicitly instructed not to make interpretations or diagnoses. Lastly, the use of an Ethical Code (see Appendix C) is an additional measure designed to encourage safe and responsible peer counseling interactions.

Substitution of peer counseling for psychotherapy. An additional concern is that the program might not be effective and students could go without proper psychological care. To avoid this, the first program session and the Ethical Code both remind students that the program is not a substitute for psychotherapy. This is also clearly communicated during informed consent and students with clinical levels of distress are not eligible to participate. Although the program is not a substitute for therapy, research on experimental disclosure suggests that even short sessions can be therapeutic. For example, even small doses of journaling can result in significant effects even when interventions are provided in extremely small doses comparable to the length of a peer counseling session (Frattaroli, 2006). As such, the program is expected to provide psychological benefits but is not expected to be seen as a replacement for traditional services.

Emotional contagion. There is a possibility that students could enter into spirals of negative thinking or engage in collective negative rumination. To buffer against this, the Ethical Code reminds students to only engage in peer counseling when they have the best interests of their peer counseling partner in mind and to halt peer counseling if they are engaging in co-rumination. Additionally, students will change peer counseling partners during each subsequent session, which mitigates the risk of continuingly negative pairings. Importantly, the curriculum

includes training on goal setting and how to end sessions in a constructive, forward-looking manner that is intended to provide an additional buffer against rumination.

Burnout or negative consequences to affect. One final consideration is that peer counselors could burnout or otherwise suffer adverse consequences from being in the role of support provider. This possibility is strongly curbed by the reciprocal nature of the program. When participants are both provide and receive support on the same day, this mitigates the potential negative effects of providing support to others (Gleason et al., 2008). Participants also only commit to 5 peer counseling exchanges outside of group meetings, which is unlikely to be an unmanageable burden. Students are also informed they can drop out at any time.

Procedures. Prior to the study, approval will be received by the Institutional Review Board at UT-Austin. Interested participants will be directed to complete an online Qualtrics survey including 1) informed consent, 2) the GSI questionnaire, and 3) a very brief application intended primarily to assess for motivation and to increase commitment. Participants will then be randomly assigned to either the treatment or control group. Both groups will complete a pre-test survey, including outcome measures and a demographic questionnaire. The treatment group will then begin the peer support program, which will last one semester. The control group will engage in treatment as usual and will gain access to the program at the beginning of the following semester. All participants will complete follow-up surveys (same measures, minus demographics and GSI) upon program completion, and again 4-weeks after program completion. All peer support program sessions will be conducted at the CMHC at UT-Austin, with the exception of students' 1:1 pair meetings, since these occur at a time and place of the students' choosing.

Peer Support Leaders. Peer Support Leaders are advanced students who facilitate the five evening group sessions that occur as part of the program. In the first iteration of the program,

Peer Support Leaders will be selected from a pool of students who have already completed the peer educator curriculum run by the Longhorn Wellness Center. As part of this previous training, these students will have completed courses for academic credit where they receive training in public health theories, behavior change, group facilitation and topics in student health. Success in these previous programs is taken as a relative indicator of reliability, responsibility, competence and interest in working with other students to promote health and wellness. Eight peer support leaders will be selected following completion of a brief application. Peer Support Leaders will be further trained by participating in a run of the program led by program staff in the semester preceding the study. In following iterations of the program, Peer Support Leaders will be selected from a pool of high-achieving program alumni.

Throughout the program, Peer Support Leaders receive supervision in six 1-hour group meetings with program staff that occur in between each session they lead. In each meeting, Peer Support Leaders will 1) receive additional training on group facilitation and curriculum for the next group session, 2) discuss any facilitation or group challenges that may be arising, and 3) discuss any potential students of concern with program staff. Peer Support Leaders will also have the opportunity to schedule 1:1 meetings with program staff to privately discuss individual students or any other issues, if and as needed.

Peer Support Leaders will commit to a 1-year involvement. Because students must pass a selective application process to become Peer Support Leaders, and because similar programs such as CMHC's Peer Educators have had low attrition rates, it is expected that attrition of Peer Support Leaders will be similarly low. Each group is led by two Peer Support Leaders and in the event of attrition the staff member managing the program would temporarily fill in as the second group leader until a replacement is identified.

Incentive structure. Students' primary incentives for completing the program are 1) learning transferable relationship skills, 2) building meaningful peer relationships, and 3) completing an experience that will benefit their resume. However, it is also important to incentivize survey completion. Students in the treatment group will be required to fill out the first battery of measures to begin the program and will complete follow-up measures in person at the conclusion of the final group meeting. For this reason, it is most important to incentivize completion of the 4 weeks-post measures for the treatment group, and all measures for the control group. Survey completion will be incentivized through a raffle of Apple Airpods headphones. Ten pairs of Airpods will be purchased for $150 each. Students in the treatment group will receive one raffle ticket for completing the 4 weeks-post measure. Students in the control group will receive two tickets (a greater number, intended to assuage the downside of not being able to participate immediately) upon completion of the 4 weeks-post measure, given completion of the two previous measures as well. Airpod cost will come from research funds associated with the principal investigator's Harrington Fellows grant.

Measures

Demographics and counseling center data. Demographic information will be collected including age, ethnicity, gender, school year (e.g., freshman), major, and counseling services utilization. We will also code every student peer support pairing, as well as every Peer Support Leader-student pairing, in case it is necessary to control any variance they may introduce.

Loneliness. Because a major aim of the peer support program is to increase the quantity and quality of students' relationships, loneliness is one of our two major outcomes. The revised UCLA Loneliness Scale (R-UCLA; Russell, Peplau, & Cutrona, 1980) is the most widely used measure of loneliness. It is a 20-item assessment of participants' self-reported degree of

loneliness (e.g., “I feel left out,” “No one really knows me well”), and items are scored on a 4-point response scale (1 = *Never*, 2 = *Rarely*, 3 = *Sometimes*, and 4 = *Often*). Higher scores reflect higher levels of loneliness. The R-UCLA has a strong internal consistency using student samples of a = .92, 95% CI [.909, .930] (Russell, 1996) and a test-retest reliability over a two-week interval of r = .85 (Hartshorne, 1993).

Psychological Flourishing. Given the link between quantity and quality of student relationships and overall wellbeing, psychological flourishing is the second of our two major study outcomes. Additionally, self-determination theory is directly associated with the concept of psychological flourishing (Ryan, Curren, & Deci, 2013; Ryan, Huta, & Deci, 2008). The Flourishing Scale (FS; Diener, Wirtz, Tov, Kim-Prieto, Choi, Oishi & Biswas-Diener, 2009) is a widely used measure of self-perceived success and wellbeing (e.g., “I actively contribute to the happiness and wellbeing of others"). Items are scored on a 7-point scale with response options: 1 = *Strongly disagree*, 2 = *Disagree*, 3 = *Slightly disagree*, 4 = *Mixed or neither agree nor disagree*, 5 = *Slightly agree*, 6 = *Agree*, 7 = *Strongly agree.* Possible scores range from 8 to 56, with higher scores indicating higher levels of psychological strengths and resources. Internal reliability of the Flourishing Scale using a student sample is a = .89, 95% CI [.874, .904] (Howell & Buro, 2015) and 1-month test-retest reliability is r = .71 (Diener et al., 2010).

Analyses and Expected Results

Preliminary Analyses. Consistent with existing conventions, we will use a power level of .80. This study uses two repeated measures ANOVAs to assess two dependent variables, so we will use a Bonferroni corrected alpha of .025 (.05 / 2) to reduce the risk of Type 1 error due to multiple comparisons. Because this program involves a group training with a consistent set of participants and is intended to improve mental health outcomes, group therapy is the closest

analog for predicting effect size. A meta-analysis across 51 group therapy trials found an average effect size of d = .58 when comparing group treatment clients to untreated controls, and an effect size of d = .57 specifically in studies of "general" (ie. process) groups versus groups for specific ailments or disorders (Burlingame, Furier, & Mosier, 2003). Because this study is a preliminary assessment, even small effect sizes are of interest. However, the correction for multiple comparisons and the moderate test-retest reliability of the FS scale pose limitations, so this study will use a Minimum Detectable Effect Size (MDES) of .4.

Using PowerUp! (Dong & Maynard, 2013) and the assumptions above for a two-tailed test, we calculate the sample size for this study to be 121 participants. Attrition can reach 50% for repeated-measures designs (Ployhart & Vandenberg, 2010). However, attrition in the present study is expected to be lower because 1) participants become part of peer groups where there is a social cost to dropping out of the group, and 2) participants are compensated both via Airpod raffle and through gaining a potentially valuable resume item. Because of these factors, we will assume a 25% dropout rate and use a sample of N = 161. If obtaining a sample of adequate size proves difficult, we will raise the MDES to .55 in order to detect medium effect sizes that are still lower than those reported in Burlingame, Furier, & Mosier (2003). This would result in a much smaller sample size of N = 65, or N = 87 after factoring in attrition.

All analyses will be conducted using SPSS version 26. Individuals with missing data will be removed using listwise deletion, which is not expected to bias the result or result in a significant loss of power as long as the proportion of missing data is low (Graham, 2009). Additionally, standardized residuals will be inspected to identify outliers and a sensitivity study will be conducted. Outliers will be discarded only if they significantly impact results and there is a legitimate reason to discard them. Before proceeding with the primary analysis, we will

examine pre-existing differences between the intervention and control groups on the demographic and pre-test variables to assess for possible randomization errors. Although significant differences are not expected, any differing factors can be added as covariates in the subsequent analyses.

Since the training is conducted in groups, it is also important to examine the between-group variance to ensure that groupings do not have a large influence on treatment outcomes and thus violate the assumption of independence. In order to assess for this, an intraclass correlation coefficient can be calculated following procedures described in McCarthy, Whittaker, Boyle, & Eyal (2017). If the ICC value is closer to 1, implying that the assumption of independence has been violated, then the effect of groupings must be accounted for in the analysis in order to avoid inflating the Type 1 error rate. This can be done by clustering the standard errors in the treatment group (see Cameron & Miller, 2015; Hedges & Citkowicz, 2015). Additionally, each student-student, student-group, and student-facilitator pairing will be coded to allow for additional analysis of cluster effects, as needed.

Analyses. To assess whether reductions in loneliness and increases in flourishing are of greater magnitude in the treatment group as compared to the control group, two 2x3 analyses of variance (ANOVA) will be used, one for each dependent variable. Each ANOVA will compare treatment vs. control at each of the three time points using the following procedure: if the overall F-test is significant, we will assess for the presence of a significant interaction of Treatment vs. Time. Assuming the interaction is significant, we will then examine simple main effects. We will first compare mean differences in the dependent variable across the treatment and waitlist conditions at each of the three timepoints using independent samples *t*-tests. Then, to further investigate the sustainability of changes over time, we will compare mean scores for the

dependent variable between post-test and 4 weeks post-test, within the treatment condition. This procedure will then be replicated for the second ANOVA using the second dependent variable. Effect sizes will be reported using Cohen's *d* (Cohen, 1988).

Hypotheses and Expected Results.

Preliminary Analyses. Because randomization is assumed to have been successful, no significant differences are expected between the treatment and waitlist groups at baseline on demographic or pre-test measures.

Hypothesis 1. Hypothesis 1 predicts that students in the treatment group will exhibit significantly lower (p <.025) levels of loneliness as measured by the R-UCLA between the pre- and post-test time points, whereas levels in the waitlist control group will remain constant. Independent samples *t*-tests within each time point are expected to show that: prior to the intervention, treatment and control groups have similar R-UCLA values; post-intervention the treatment group values are significantly lower; and 4 weeks later the treatment group values are still significantly lower. Cohen's *d* is expected to be medium in size. We also expect to find no significant difference (p >.025) comparing the mean post-test score for the treatment group with that group's mean score 4 weeks later. Expected results for Hypothesis 1 are found in Figure 1. If Hypothesis 1 is correct, students participating in the intervention would have experienced significantly lower levels of loneliness, which persist 4 weeks post-program, as a result of having participated in the group peer counseling program.

Hypothesis 2. Hypothesis 2 predicts that students in the treatment group will exhibit significantly higher (p <.025) levels of psychological flourishing as measured by the FS between the pre- and post-test time points, whereas levels in the waitlist control group will remain constant. Independent samples *t*-tests within each time point are expected to show that: prior to

the intervention, treatment and control groups have similar FS values; post-intervention the treatment group values are significantly higher; and 4 weeks later the treatment group values are still significantly higher. Cohen's *d* is also expected to be medium in size. We also expect to find no significant difference ($p > .025$) comparing the mean post-test scores for the treatment group to that group's mean score 4 weeks later. Expected results for Hypothesis 2 are found in Figure 2. If Hypothesis 2 is correct, students participating in the intervention would have experienced significantly higher levels of flourishing, which persist 4 weeks post-program, as a result of having participated in the group peer counseling program.

Discussion

Summary

The present study proposal outlines a randomized controlled trial of a group peer counseling program to be implemented at the University of Texas at Austin where students both provide and receive peer counseling within a group of peers. If effective, this intervention has the potential to decrease students' levels of loneliness while simultaneously increasing their psychological wellbeing. The only other empirical evaluation of a *reciprocal* peer counseling program in any U.S. college or university was conducted over 40 years ago at the University of Arizona (McWilliams, 1979). Although that study has methodological limitations similar to other studies of the same era, results highlight the promise of reciprocal peer counseling as an impactful and much needed innovation.

Despite this, to my knowledge no other reciprocal peer counseling program has been implemented or evaluated at any US college or university since. Given the rapidly increasing rates of student mental health issues and the inability of current CMHC models to adequately address rising demand, scalable and preventive mental health innovations are much needed. Consequently, the revival of this understudied research area has the potential to have a meaningful impact on the mental wellbeing of students at U.S. colleges and universities.

Limitations

This study has several limitations that must be considered. One limitation is the logistical complexity of the study, which requires recruiting and training Peer Support Leaders, and coordinating regular group meetings. To mitigate this complexity, UT-Austin's CMHC plans to hire a full-time staff member to manage the program and has already secured a portion of the necessary funding. Peer Support Leaders will be recruited from existing programs, such as

CMHC's Peer Educators program, which currently receives two to three times more applications than available spots in the program. Peer Support Leaders will also commit to a 1-year involvement, which will additionally optimize for quality and commitment.

A second limitation is that individuals may drop out of the program because it requires a substantive time commitment, or for other unanticipated reasons. Due to the potential for attrition in longitudinal studies, we have adjusted our target sample size. However, because the intervention happens in a group setting, individuals will have social pressure not to drop out. Survey completion is also incentivized, which is expected to reduce attrition. If needed, we could also assess participants with survey measures at the program mid-point. Intermediate measures can also then used to predict missing data in later measures and assess whether control program dropouts are lonelier or less flourishing than other participants.

A third limitation is the relatively brief 4-week follow-up period. Although it would be useful to assess whether changes to loneliness or psychological flourishing persist over longer timescales post-program, and particularly whether they extend into subsequent years, extending the measurement window would also increase attrition. Because sample size is already a limitation in this study, a more thorough analysis of the longevity of program effects will remain a question for future research.

A fourth limitation is that this pilot program is designed to increase accessibility by limiting contact hours and does not extensively address multicultural considerations. Different racial or ethnic groups may hold different beliefs about what constitutes an effective support relationship (Fraga et al., 2004) and a large body of research documents how counseling can be ineffective or harmful for minority populations if not delivered in a multiculturally competent manner (Sue & Sue, 2012). Although the first program session provides some guidance on peer

counseling within a diverse student body and Peer Support Leaders will receive information on multicultural competence during their training, future iterations of the program should increase time spent on diversity and multicultural issues to ensure that peer counseling services are both accessible and beneficial for a diverse population of students.

A fifth limitation is that the present study does not include measures of Peer Support Leaders' adherence to curriculum and competence in delivering it. This is somewhat mitigated by two factors: 1) the initial session and peer counseling demo is directed by program staff who have a higher level of training, and 2) content of follow-up sessions is restricted to interactive games and pre-constructed psychoeducational materials such that Peer Support Leaders are responsible for facilitating the experience rather than directly teach content. However, future studies would benefit from more directly measuring intervention fidelity or delivering all psychoeducation through a high-fidelity online course.

Future Directions

The study outlined above is intended to provide preliminary data on the potential benefits of a reciprocal group peer counseling program. This would lay the groundwork for future development and assessment of such programs. Potential future areas of research interest that stem from the present study are outlined below:

As with any intervention, it is important to assess whether the program has lasting effects on student wellbeing. Given that one of the program's goals is to help CMHCs foster mental health prevention, this is particularly important. The study outlined above begins to answer this question by assessing student wellbeing 4 weeks post-intervention. This is because longer follow-up periods are likely to increase missing data, and sample size is already a limiting constraint in this study. However, future studies would benefit from assessing follow-up effects

over longer timeframes, such as six months or one year post-intervention. Additionally, it would be valuable to assess the degree to which the program assists students in creating friendships and supportive relationships that endure even when the program is over.

Similarly, it would be useful for future studies to gather qualitative data on how the program impacts the perception of mental health accessibility. By presenting mental health resources in a format that does not feel like formal counseling (students neither schedule appointments nor meet with adult providers) the program has the potential to both reach students who would otherwise not have accessed services and to decrease barriers to entry for students who are already aware of services and may need them. Similarly, it would benefit future studies to gather data on CMHC utilization rates before and after implementation of the peer counseling program, including usage rates by students who are program participants. This type of data would facilitate an understanding of how implementing a reciprocal peer counseling program affects the overall campus mental health climate and not just participating students. There has long been a hypothesis that increased peer counseling would free up clinican time and resources to address an increasing volume of students with clinical levels of distress (see Ender, 1984; Fennell, 1993). Finally testing these hypotheses would be extremely informative.

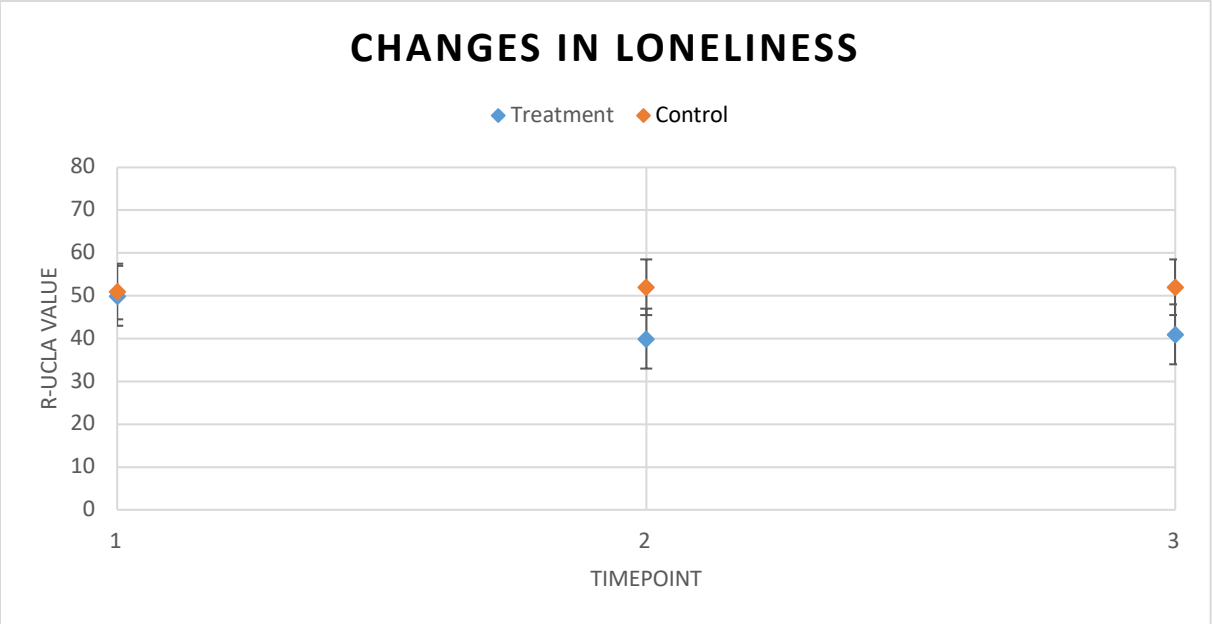
Future studies should also consider whether the program has differential effects depending on whether a student has currently or previously engaged in 1:1 counseling. This is not a primary research question in the present study for several reasons: 1) recruitment will occur through multiple channels so the proportion of students concurrently visiting the CMHC while enrolled in the program is expected to be low, 2) we assume most students who are not in high distress will consider the program to be a large time investment in their mental wellbeing and will be less likely to pursue concurrent counseling, 3) students not exhibiting high levels of

distress or suicidal thoughts are usually assigned to a single session at the UT CMHC, which is unlikely to significantly affect flourishing, and 4) if the number of concurrent therapy users is small (as predicted) this would create small sample sizes in at least one of the ANOVA groups, which would limit power. However, if it becomes clear that many students are concurrently pursuing counseling, future studies would benefit from assessing differential impacts of the program depending on whether participants are currently pursuing traditional counseling.

Finally, the above study does not allow us to distinguish the beneficial effects of participating in reciprocal peer counseling from the beneficial effects of group participation in general. It is of course possible that simply putting students in groups that meet regularly could lead to mental health benefits and reductions in loneliness, even if students do not engage in deep and meaningful conversations together. Future studies can use alternate control conditions such as activity groups (eg. book clubs) or alternate mental health resource groups (eg. meditation) to better differentiate the effects of engaging in peer counseling from the effects of being in a group. Given the relative lack of empirical data in this promising, yet understudied, research area, future studies should build off the present study and continue to illuminate ways in which CMHCs can evolve to meet the needs of an ever more distressed student body.

Figures

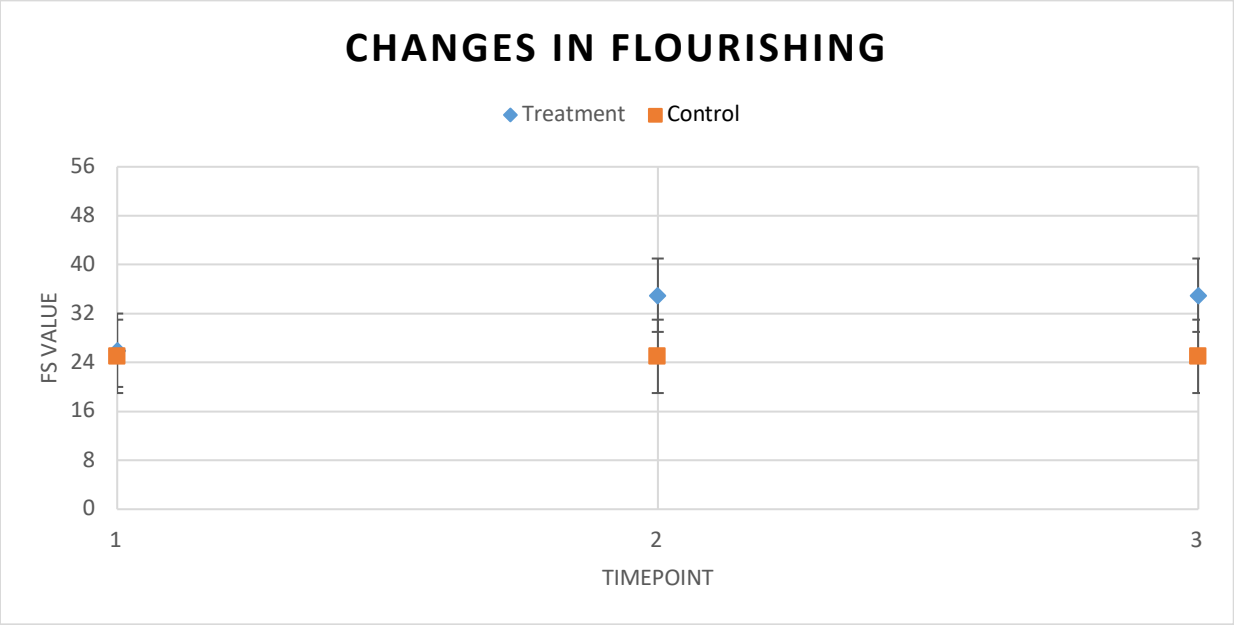
Figure 1
Example Results for Hypothesis One



Timepoints: 1 = Baseline; 2 = Post-Intervention; 3 = Four weeks Post-Intervention; R-UCLA = Revised UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980); Higher R-UCLA values denote higher levels of loneliness; error bars denote one standard deviation in student values around the group mean.

NOTE: Results are hypothetical and not based on actual data.

Figure 2
Example Results for Hypothesis Two



Timepoints: 1 = Baseline; 2 = Post-Intervention; 3 = Four weeks Post-Intervention; FS = Flourishing Scale (Diener et al., 2009); Higher FS values denote higher levels of psychological flourishing; error bars denote one standard deviation in student values around the group mean.

NOTE: Results are hypothetical and not based on actual data.

Appendices

Appendix A – Measures

Demographics questionnaire

1. What year were you born? [dropdown with years]

2. What ethnicity do you most strongly identify with?

    a. Native American or Alaskan Native
    b. East Asian
    c. South Asian (including Indian Subcontinent)
    d. Black or Afro-Caribbean
    e. Latino or Hispanic
    f. Native Hawaiian or Other Pacific Islander
    g. White, non-Hispanic
    h. Middle Eastern or Arab
    i. Other ____

3. What gender do you most identify with?

    a. Woman
    b. Man
    c. Non-binary/ other gender
    d. Prefer not to say
    e. Prefer to self-describe ___

4. What your major area of study? [dropdown with majors available at UT]

5. What type of student are you?

    a. First year undergraduate
    b. Second year undergraduate
    c. Third year undergraduate
    d. Fourth year undergraduate
    e. Fifth year undergraduate or above
    f. Masters student
    g. PhD student

6. What best describes your utilization of mental health services? [checkbox]

    a. Current user of UT Counseling and Mental Health Services
    b. Past user of UT Counseling and Mental Health Services
    c. Currently engaged in counseling or therapy outside of the university
    d. Previously engaged in counseling or therapy outside of the university

Revised UCLA Loneliness Scale

Measures subjective feelings of loneliness and feelings of social isolation. Higher scores indicate higher loneliness. Items are scored on a 4-point scale, with response options: 1 = Never, 2 = Rarely, 3 = Sometimes and 4 = Often. Reverse items are marked with an (R).

Revised UCLA Loneliness Scale (Russell, Peplau & Cutrona, 1980).
1. I feel in tune with the people around me. (R)
2. I lack companionship.
3. There is no one I can turn to.
4. I do not feel alone.
5. I feel part of a group of friends. (R)
6. I have a lot in common with the people around me. (R)
7. I am no longer close to anyone.
8. My interests and ideas are not shared by those around me.
9. I am an outgoing person. (R)
10. There are people I feel close to. (R)
11. I feel left out.
12. My social relationships arc superficial.
13. No one really knows me well.
14. I feel isolated from others.
15. I can find companionship when I want it. (R)
16. There are people who really understand me. (R)
17. I am unhappy being so withdrawn.
18. People are around me but not with me.
19. There are people I can talk to. (R)
20. There are people I can turn to. (R)

Flourishing Scale

Measures self-perceived success and summative wellbeing. Possible scores range from 8 to 56, with higher scores indicating higher levels of psychological strengths and resources. Items are scored on a 7-point scale with response options: 1 = Strongly disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Mixed or neither agree nor disagree, 5 = Slightly agree, 6 = Agree, 7 = Strongly agree.

Flourishing Scale (Diener, Wirtz, Tov, Kim-Prieto, Choi, Oishi & Biswas-Diener, 2009).
1. I lead a purposeful and meaningful life. 2. My social relationships are supportive and rewarding. 3. I am engaged and interested in my daily activities. 4. I actively contribute to the happiness and well-being of others. 5. I am competent and capable in the activities that are important to me. 6. I am a good person and live a good life. 7. I am optimistic about my future. 8. People respect me.

Appendix B – Program Curriculum

Introductory Session: Getting Started, Demo, Ethics, Safety.

The first session has five objectives: 1) reviewing the program's objectives and how it works, 2) overviewing procedures for safety and ethics, 3) demonstrating peer counseling, 4) catalyzing an initial bonding experience among students, and 5) providing an initial peer counseling experience. First, program administrators will introduce themselves and the Peer Support Leader team. Students will be divided into their respective peer counseling groups of ~20 students each and will complete the improvisational game "I'm a Tree" in their groups as an icebreaker. Next, program leaders will review the objectives and expectations of the program. This will use a flipped classroom format where students first read a handout for several minutes and then facilitators answer questions and provide additional information. Subsequently, the facilitators will demo a 5-minute peer counseling exchange and answer questions. Facilitators will then transition into a discussion of peer counseling ethics, including considerations for peer counseling within a diverse student body. Facilitators will also overview the procedures of how to notify staff of any students they are concerned about to ensure safety. Finally, students will return to their groups and complete a self-disclosure exercise in rotating pairs, adapted from Aron et al. (1997), that is designed to facilitate interpersonal connection.

Follow-up Session #1: Presence, Listening, Positive Regard, Not Fixing the Problem.

The first follow-up session is designed to introduce students to basic peer counseling attitudinal competencies ("how to be"). Its objectives are to: 1) teach active listening skills, 2) introduce the concept of positive regard for the client, 3) practice skills associated with giving high quality attention, and 4) understand that giving advice or otherwise trying to "fix" the problem can often be counterproductive. Students will begin by playing the authentic relating game "Noticing", which will be modeled by facilitators. This is designed to increase awareness of the present moment and the power of simply providing high quality attention. After facilitators debrief this game, students will play the game "Empathy", which teaches active listening skills. Next facilitators will provide brief psychoeducation on active listening, positive regard, SOLER (counseling posture) and the importance of not fixing the client's problem or immediately providing suggestions. Facilitators will discuss how to know if making suggestions is appropriate and how to ask the client first before providing them. Finally, facilitators will ask participants to share experiences from any peer counseling sessions they have had since the last group meeting and note any outstanding questions or issues to be referred to program staff.

Follow-up Session #2: Reflections and Open-Ended Questions.

This session teaches basic verbal peer counseling skills. First students will receive brief psychoeducation on reflections, including how reflection is different from interpretation. Students will work in pairs to practice reflections, starting with reflections of content, then reflections of feeling, and ultimately reflections of meaning. Facilitators will ask for share-outs about the experience. Next students will receive brief psychoeducation on open ended questions and complete an exercise to practice them in triads. Finally, students will receive a set of ten cards, of which 7 are labeled Reflections and 3 are labeled as Open Ended Questions. Students

will complete a brief peer counseling session in pairs where the person in the counselor role must use all their cards as they respond, thus practicing greater use of reflections compared with questions. Facilitators will end by asking participants to share experiences from any peer counseling sessions they have had since the last group meeting and noting any outstanding questions or issues to be referred to program staff.

Follow-up Session #3: Ending Sessions, Setting Goals and Next Steps.

This session is designed to reduce rumination by teaching basic coaching and goal setting skills that can be used at the end of each session. Students will receive brief psychoeducation on the concept of SMART goals (Specific, Measurable, Attainable, Relevant, Time-Based), as well as several cognitive frames for goal setting (eg. differentiating between what can and cannot be controlled). Students will then practice formulating potential goals and next steps in response to hypothetical problems. Importantly, in order to reduce advice giving, students will be instructed that goals should originate from the client with the peer counselor acting in a supportive capacity. Facilitators will end by asking participants to share experiences from any peer counseling sessions they have had since the last group meeting and noting any outstanding questions or issues to be referred to program staff.

Follow-up Session #4: Immediacy, Listening to Feelings, Following the Energy.

This session provides a brief introduction to more advanced peer counseling skills focused on using feelings to direct the flow of conversation. Students will begin by playing a game called "Frame", which is designed to draw attention to feelings, sensations and thoughts that may be happening in any given moment of conversation. Students will then receive brief psychoeducation on the role of feelings and body sensations in peer counseling. In pairs, students will then practice peer counseling while pausing every 2 minutes to assess the "frame' of the conversation and figure out if there is an alternate direction that would be more interesting or useful to the client. Facilitators will end by asking participants to share experiences from any peer counseling sessions they have had since the last group meeting and noting any outstanding questions or issues to be referred to program staff.

Follow-up Session #5: Wrap-Up, Review, and Next Steps.

This session will begin by students sharing what their experiences in the program have been and what they have learned. Facilitators will then present an overview of major concepts covered in the program and ask for clarifying questions or comments on the material. Facilitators will then host a conversation on how peer counseling can be incorporated into students' lives post-program. Students will each be able to nominate up to three peers that they would enjoy having an informal peer counseling relationship with following the program and these nominations will be communicated to the students post-program. Students will also receive information about becoming a facilitator for subsequent iterations of the program. Finally, students will share appreciations they have for other students and the program experience.

Appendix C – Peer Support Ethical Code

Program participants will agree to abide by the following 5 ethical peer support principles:

1. Being Helpful
I commit to helping my peer support partners grow and improve their lives. I will be mindful of the possibility of "overthinking" or entering into negative spirals during sessions and will help us move through these to the best of my ability. If I recognize bias, discrimination, personal issues or any other dynamics that interfere with my ability to wish only the best for my peer support partner, I agree to discuss this with program staff before engaging in further peer support.

2. Avoiding Conflicts of Interest
I agree to be mindful of power dynamics and conflicts of interest in my peer support relationships. I agree to check in with my peer support partner to ensure that my partner feels comfortable doing this with me. I agree to be especially mindful of situations where I may have power over my peer support partner and to refrain from doing peer support with them if it is not in their best interest. I agree to not enter into new sexual or romantic interactions with members of my peer support cohort within the duration of the program.

3. Promoting Safety
If I believe someone I am working with is in severe distress, is at risk of harming themselves, or suffers from a mental health condition too severe to benefit from peer support from me, I agree to discuss this with program staff immediately by calling ____. I will also remind the student that peer support is not a replacement for accessing mental health services and will remind them of the CMHC crisis line ____ and suicide hotline _____. I also agree to refrain from participating in peer support if I identify as having a severe mental health condition and am unsure whether this practice would be beneficial for my wellbeing.

4. Representation of Abilities
I understand that peer support is not psychotherapy and I agree not to act or represent myself inside or outside the program as if I have a greater level of training than I actually possess. I agree not to make interpretations or diagnoses, or to give the impression that I am qualified to do so if I have not received requisite training.

5. Confidentiality
I agree to not share any information shared by my peer support partner without their explicit verbal consent, except in cases where I fear their wellbeing would be at serious, imminent risk by my not doing so. It is OK for me to share general information we discussed if it does not include any potentially identifying information. I also agree not to create any recordings of our sessions without my partner's permission.

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